

**REMARKS**

Claims 1-36 are now pending in the present application. Applicant has carefully studied the outstanding Office Action. The present Response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of this application are respectfully requested. No new matter has been added by any of the amendments to the specification. Applicants respectfully request reconsideration and withdrawal of the Examiner's rejections in view of the foregoing amendments and following remarks.

**CLAIM REJECTIONS – 35 U.S.C. §103(a)  
RESPONSE TO APPLICANT'S ARGUMENTS**

All extant claims have been rejected in accordance with 35 U.S.C. §103(a) as being unpatentable over Freeman et al. (U.S. Patent No. 5,931,764) in view of Comiskey et al. (U.S. Patent No. 6,639,578). In response to Applicants' Arguments responsive to the December 17, 2003, Office Action, Examiner stated the following:

Applicant argues that Freeman ['764] does not teach stepping up voltages to the display driver circuitry. While this is true with regard to the LCD display suggested at col. 3, lines 32ff, patentee suggests other displays requiring higher power sources at col. 3, lines 55ff, as noted above. Although the preferred embodiment does not contemplate a voltage step up circuit for the LCD display, one skilled in the art attempting to construct a timepiece with the suggested electrophoretic display would obviously be aware of the higher voltage requirements thereof. The Comiskey et al. ['578] display being one of the suggested display types, requires a higher voltage than the conventional 3V power supply in small electronic devices such as timepieces. The latter reference further teaches the use of such stepped up voltages to drive the display, as noted above. Thus, one of ordinary skill in the art having the suggestion in Freeman of using electrophoretic displays would employ the teachings of Comiskey et al. ['578] to provide such display with an appropriate voltage supply circuitry and step up.

These rejections are respectfully traversed. The prior art cited by Examiner does not, either alone or in combination, appear to teach or disclose the voltage step-up circuit element of Applicants' invention. Because the three independent claims (claims 1, 26, and 33) and their dependent claims share the distinctions over these references, the distinctions will be discussed together.

Neither Freeman et al. '764 nor Comiskey et al. '578, appear to teach, suggest, or give any incentive to make the needed changes to reach the presently claimed invention. Indeed, the

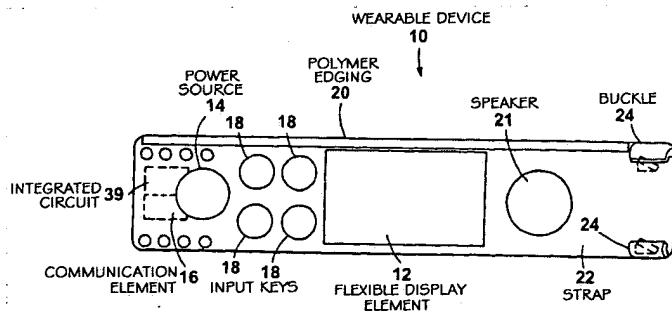
Freeman et al. '764 reference actually teaches away from the presently claimed invention. As shown in abridged Figure 1 (below right), the Freeman et al. '764 patent discloses a wearable device 10 which includes a flexible display element 12 and a strap 22 that forms the body of the device 10. The strap 22 can secure the device 10 around a person's wrist. The device 10 incorporates lightweight, flexible components that enable the device to conform to a given contour and safely undergo flexing of the type and magnitude normally experienced by watches, anklets, etc. during physical activity. The device 10 can receive information via input keys 18 and present information via the flexible display element 12 and a thin-film flexible piezoelectric speaker 21. The piezoelectric speaker/microphone 21 also enables the device 10 to receive sound information. (col. 2, line 21 *et seq.*)

Unlike the device of the present invention, Freeman et al. '764 does not teach or claim a timepiece module comprising a single power source capable of powering a bi-stable display comprised of a plurality of encapsulated display elements. While Examiner correctly points out that Freeman et al. '764 suggests the use of displays other than the preferred ferroelectric LCD disclosed in its specification (*see e.g.*, col. 3, lines 21-57), Freeman et al. '764 further discloses display elements require a constant power source to display the images. (*see* col. 3, lines 57-58; *compare* with col. 2, lines 61-65). This is exactly one of the situations addressed by the present Application's specification, wherein the following is disclosed:

Emissive electroluminescent films and organic light emitting diode films can be deposited on flexible substrates to create flexible displays. However, these devices require continuous power consumption for operation, and thus are not practical for many applications.

(*see* page 3, lines 12-15). Moreover, the bi-stable displays disclosed in Comiskey et al. '578 patent, which is referenced by the Examiner, require a higher powered voltage than envisioned by the Freeman et al. '764 device.

[A]n electronic ink display may require 18 volts or more. In contrast, an LCD display might require 2 to 3 volts.



**FIGURE 1 (abridged)**  
Freeman et al. '764

(see *Specification*, page 7, lines 17-22). Indeed, the present invention addresses problems which have arisen in attempts to implement the bi-stable displays disclosed in Comiskey et al. '578. As further noted in the Specification,

Despite the promise of e-ink and gyricon displays, neither technology has achieved any level of commercial implementation. A need exists for translating these technologies into useful displays in the field of watches. Specifically, a need exists for translating the memory retention features of electrophoretic displays into a power saving feature for watches. A need also exists for a watch that can take advantage of the image inversion features of these types of displays.

(see *Specification*, page 83, lines 26-28). A critical inventive concept integral to the present invention is the use of a single power source to power the control unit at a relatively low voltage and to power the bi-stable display at a relatively high voltage. Only by the novel integration of a step-up voltage circuit into the system, is the present invention able to accomplish this. While Freeman et al. '764 discloses that the driver circuit 42 “develops the voltages appropriate to activate and deactivate the display pixels” (see col. 3, lines 60-62), Examiner correctly surmises that Freeman et al. '764 does not disclose any means for stepping up the voltage. Moreover, the Freeman et al. '764 neither discloses nor suggests any incentive nor requirement for stepping up the voltage. The displays of the Freeman et al. '764 device are all low voltage displays compared to the one used in the present invention. Thus, there is no need for stepping up the voltage in the Freeman et al. '764 device.

On the other hand, while the Comiskey et al. '578 patent teaches the use of high voltage CMOS display drive circuitry, such as the Supertex Corporation HV57708PG, to drive its electrophoretic displays, it does not appear to teach the inclusion of a voltage step-up circuit element coupled between the power source and the control unit as taught in the present invention.

It is well established that as a part Examiner’s burden to establish a *prima facie* case of obviousness, Examiner is required to show that the referenced teachings “appear to have suggested the claim subject matter.” *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143, 147 (C.C.P.A. 1976). As stated by the Federal Circuit, “Obviousness cannot be established by combining teachings of the prior art to produce the claimed invention, absent some teaching suggestion or incentive supporting the combination.” *In re Geiger*, 815 F.2d 683, 2 USPQ 2d 1276, 1278 (Fed. Cir. 1987). Neither Freeman et al. '764 nor Comiskey et al. '578, either alone or in combination, teach or disclose every element of Applicant’s invention. Examiner cannot,

therefore, maintain a *prima facie* case of obviousness, and the rejection of claims 1-36 should be withdrawn.

Therefore, Applicants respectfully request reconsideration and withdrawal of the Examiner's rejection of claims 1-36 based upon 35 U.S.C. § 103(a).

**CONCLUSION**

Applicants believe the claims are in condition for allowance. It is respectfully urged that the subject application is patentable over references cited by Examiner and is now in condition for allowance. Applicants request consideration of the application and allowance of the claims. If there are any outstanding issues that the Examiner feels may be resolved by way of a telephone conference, the Examiner is cordially invited to contact David W. Carstens at 972.367.2001.

The Commissioner is hereby authorized to charge any additional payments that may be due for additional claims to Deposit Account 50-0392.

Respectfully submitted,

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